THE CLOSURE EFFECT:

EVIDENCE FROM WORKERS COMPENSATION LITIGATION

by

Henry Hyatt *
U.S. Bureau of the Census

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Abstract

Consideration of the "best interests" of Workers Compensation (WC) claimants often involves the assumption that those who receive benefits in a "lump-sum" behave "too myopically" with respect to labor supply. However, many attorneys argue that lump-sum settlements induce a beneficial "sense of closure." In this paper, I provide an empirical context for these ideas using a unique set of linked administrative databases owned by the State of California. Upon receipt of a court-approved lump-sum settlement, WC claimants immediately increase labor supply. No such change is found for claimants who receive a court-approved settlement in which the insurer provides benefits over time, suggesting that the method of litigation settlement is a determinant of labor supply.

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Introduction

Lawyers offer potential plaintiffs a "sense of closure" if they pursue litigation and obtain a settlement. A prominent example of this view is given in the popular handbook for Workers' Compensation (WC) attorneys in California, *Workers Compensation Practice* (2005), which states that a lump-sum settlement that irrevocably closes a claim provides "maximum closure, the psychological benefits of which can be extremely important in many cases." Despite the widespread use of the term "closure" in popular media, and, as Bandes (2008) documents, its use in criminal sentencing, there is little research on the subject of "closure".

In contrast, there are many critics of "lump-sum" settlements, who suggest that when judges allow settlement in a single payment, the recipient's consumption and labor supply change for the worse. For example, as documented by Reville et. al. (2001), the WC law of New Mexico is based on the notion that lump-sum settlements discourage work. Economic theory supports this view: if borrowing against the present value of WC benefits is sufficiently difficult, then the availability of lump-sum payment can induce a "liquidity effect," reducing labor supply.

In this paper, I study litigation in the California WC system, which offers a rich environment in which to study the economic and psychological aspects of litigation settlement. Severely injured claimants nearly always litigate their claims, which are nearly always resolved as a settlement rather than through a ruling. There are two main types of WC settlement: "Compromise and Release" (CR) and "Stipulation and Award" (SA). Under CR settlement, the claimant receives a

single lump-sum payment and the WC claim is irrevocably closed. Under SA settlement, the insurer distributes benefits over time, and litigation only rarely resumes.

Using a unique set of linked administrative databases in order to measure labor supply before and after settlement, I find that CR (lump-sum) settlement is associated with an immediate and sustained increase in labor supply. SA settlement, by contrast, is not associated with any change in labor supply near the time of settlement. Economic reasoning rules out a strong "liquidity effect", and suggests that the irrevocable closure of the claim increases labor supply.

This paper proceeds as follows. I first describe the institutional details of WC litigation in the State of California. I next document ideas concerning the nature of a "liquidity effect" that may discourage labor supply, and document the small literature on the subject of "closure" in order to provide some theoretical context for the surprising result that follows. Thereafter, I describe a unique set of administrative data and document that an irrevocable "lump-sum" settlement is associated with an immediate and sustained increase in labor supply. A brief conclusion follows in which I suggest how further research can provide a better context for this empirical phenomenon.

Workers Compensation Benefit Payment in California

In California, roughly one hundred thousand cases are opened annually with the Workers Compensation Appeals Board (WCAB), which governs disputes concerning the provision of medical and indemnity WC benefits, which are provided to employees by insurers in the event of

a workplace injury. The most commonly received indemnity benefit is a Temporary Disability (TD) benefit, paid to injured workers when they take time off of work to recover. Once a doctor confirms that an injured worker's health shows no further scope for improvement or if the worker resumes employment, TD benefits cease. At that time, if a doctor asserts that there is evidence of permanent disability, then the insurer makes bi-weekly Permanent Disability (PD) payments, with more payments made to more severely injured claimants. These payments begin even when there is not a definite agreement between the injured worker and the insurer about the extent of permanent disability. Workers who receive PD benefits have historically been free to work.[2] In addition to temporary and permanent disability cash benefits, WC insurance provides workers with services directed to labor market re-entry, Vocational Rehabilitation (VR) benefits, and there are also benefits paid for fatal workplace injuries.

When a case is opened with the WCAB, there are several mechanisms for formally resolving disputes. The most common method is a "Compromise and Release" (CR) agreement. This method of resolution formally closes a claim, and all further liabilities, including future medical payments, that the insurer has toward the injured worker are paid in a discounted lump-sum payment, which must be paid within 30 days or else interest is charged. The next most common method of resolving a WC claim in California is through a "Stipulation and Award," (SA). This method of resolution does not formally close a WC claim: in principle the claim can be re-opened with the WCAB. SA settlement establishes general guidelines for medical treatment, and any non-delinquent PD payments are paid as an annuity rather than as a lump-sum.

[2] In 2005, the California legislature tied a portion of PD benefits to whether or not the employer made a valid return-to-work offer, but no workers affected by this reform are considered in this study.

Conceptual Framework

The Liquidity Effect

In this section, I articulate the economic foundation upon which the primary criticism of lump-sum payments rests. As Schmidt (1987) describes, nearly all states require consideration of the "best interests" of the claimant, the reason being that it widely understood to be a good thing for the income stream of claimants to be preserved, and as Reville et. al. (2001) notes, the New Mexico legislature enacted WC law on the basis of the conventional wisdom that lump-sum payments discourage work relative to payment over time. These considerations rest on the idea that the timing of the payment of benefits is a determinant of labor supply and consumption, distinct from any effect of the amount of benefits paid on labor supply. Economic theory provides a theoretical context for understanding how an individual can work "too little", that is, over-consume leisure.

Empirical evidence that people can "over-consume" a good has been catalogued and analyzed under the labels of "dynamic inconsistency", "present bias", and "hyperbolic discounting" in the behavioral economics literature, for example in Laibson (1998) and O'Donogue and Rabin (1999a). Someone with a "present-bias" has a very strong preference for consuming in the present period relative to the next, relative to that person's preference for consuming in any other future time period relative to the time period immediately following. In such a framework, the preferences of one's "future self" differs from those of one's "present self," and, following Laibson (1996) and O'Donogue and Rabin (1999b), there is some value from a commitment

device. In such a circumstance, for example, there can be welfare gains form a forced savings programs like the Social Security Old Age and Survivors Insurance program, which necessarily limits maximum consumption while working in order to guarantee a minimum amount of consumption during retirement.

Empirical evidence, such as Zeldes (1989), has shown that constraints on the inability to borrow against future labor income, in practice, limits consumption. Studies by Gruber (1997), Card, Chetty and Weber (2007) and Chetty (2008) have shown that Unemployment Insurance (UI) claimants exhibit such constraints, and Hyatt (2009a) has shown that such constraints exist for WC wage insurance claimants. When an insurer owes a claimant a lengthy series of bi-weekly payments, the ability to receive benefits in a "lump-sum" necessarily eases any constraints against borrowing against this future income. If WC claimants exhibit myopia and such borrowing constraints exist, then there is some scope for a rational claimant to be willing to pay to prohibit a lump-sum payment.

In order for a lump-sum payments to make WC claimants over-consume leisure, that is, work too little, there must be both hyperbolic discounting and a liquidity effect. This line of reasoning has testable implications for labor supply. Labor supply should decrease for lump-sum claimants when they receive the lump-sum, as this is when any borrowing constraint is most relaxed. Either a claimant's amount of earnings should decrease, or the probability of exiting the labor force should increase, or the probability of entering the labor market should decrease. The empirical evidence that follows is not consistent with these implications.

The Closure Effect

Litigants and attorneys have applied the term "closure" to describe the benefits to certain participants when legal decisions are reached. In addition to the benefit of "closure" listed on many attorneys' business websites and the assertion in *Workers' Compensation Practice* (2005) that lump-sum settlements provide "maximum closure," Armour and Umbreit (2006) and Bandes (2008) note the widespread application of the concept of "closure" by judges, therapists and victims rights groups in criminal sentencing. It is important to note that Armour and Umbreit (2006) and Bandes (2008) stress that the term "closure" is used in spite of a lack of empirical evidence on the emotional outcomes victims after sentencing, vagueness in conventional use of the term, and the lack of a consensus among Psychologists on the meaning of the term.

Most studies that consider "closure" have a broader focus than traumatic events. There are several studies that have linked a self-reported need for "cognitive closure" with the greater or lesser tendency to resolve ambiguity using the Need for Closure Scale (NFCS), presented by Webster and Kruglanski (1994). For example, Glaser et. al. (2003) report that scoring higher on the NFCS is associated with political conservatism, and de Dreu et. al. (1999) show that individuals who score higher on the NFCS tend to end negotiating games sooner than those who score lower on the scale.

A small number of studies consider closure as an emotional state, indicating the perceived sense of resolution to a stressful or traumatic event. King et. al. (2000), in a study of parents of children born with Down's Syndrome, found that parents who could write a narrative about their

experience with a more closed ending reported more personal growth as a result of the stressful life event. Salmon et. al. (2005) established a questionnaire considering several aspects of the well-being of end-of-life caregivers, which includes the Caregiver Closure Scale, and Kwak et. al. (2007) demonstrate a training program for end-of-life caregivers increases measured closure according to this Scale. Some of these studies concern an individual's self-assessed "sense of closure." For example, Beike et. al. (2004), using survey evidence, report that a self-described lack of closure for stressful events is correlated with low self-esteem.

Both these cognitive and emotional understandings of "closure" could apply to irrevocable settlement of a WC claim. Unless a CR settlement is reached, there can be some ambiguity about the degree and manner in which a particular workplace injury will, in fact, be compensated. The injured workers also may be concerned about how their actions will affect the continued provision of benefits: unless there is a CR, actions of the injured worker can be interpreted as evidence about the extent of disability, and, therefore, the ability for the claimant to qualify for additional benefits. Experiencing a severe workplace is a traumatic event, and there could be a need to "move on" after such a traumatic event behind oneself is a good. Cooperating with the insurer certainly reminds an injured worker of the injury.

These psychological consequences of the resolution of a WC claim have implications for individual labor supply. If a claimant is concerned that their working may be interpreted as evidence that their injury is less severe, the lack of CR settlement may cause the claimant to not work until the settlement is granted. Thus the resolution of uncertainty about the consequences of the injured worker's actions would increase in labor force participation. If the irrevocable

settlement allows the injured worker to "move on" after the workplace injury, such settlement may be a psychological cue for the claimant to resume previous activities. I am unable to distinguish between these very different mechanisms because I lack any measures of the cognitive disposition or emotional states of the injured workers.

The Data

Sources

Data are drawn from administrative databases owned by the State of California. I consider the experience of claimants recorded in the State's WC tracking database, the Workers' Compensation Information System (WCIS). All institutions that provide WC benefits are required to report every workplace injury with the potential to be the basis for a WC claim. A comprehensive injury report is submitted to the WCIS shortly after the workplace injury occurs. This report specifies the type of injury that occurred, including its cause and the part of body affected. It also includes the injured worker's demographic characteristics, including age, gender and place of residence; and information about the injured worker's employment, including the at-injury employer, the injured worker's wage on the date of injury, the date of hire by the at-injury employer, and the occupation category that private insurers are required use to price WC insurance. The WCIS also collects data on the WC claim that arises from the injury, if any, and any benefits paid.

These injury records are supplemented with data from the California Employment Development Department's Base Wage File (BWF), a database that records the quarterly earnings of workers covered by UI. This database contains the employee's UI taxable quarterly earnings. I append to each record of the BWF an implied race and ethnicity measure, derived from UI claims records, determined by the employee's last name. The BWF earnings and race and ethnicity are appended to a WCIS record using a probabilistic match routine.

These records are also linked to the state's tracking database for litigated WC claims, the Workers' Compensation Appeals Board (WCAB) database. This link was done based on a multi-step linking program that matched on fields common to the two databases and other data sources. The WCAB database provides information on the date the litigation started and ended, and the mechanism by which the case was closed.

Sample Selection

I include individuals injured in 2001 and 2002 who had their case litigated before the WCAB with a settlement date before or during 2005 and were working, according to the BWF, in the two preceding quarters and the quarter the injury occurred. I furthermore only include injured workers who received between $25,000 and $50,000, and those who settled their claim with a CR or SA at least six quarters after the date of injury. The final sample consists of 12,436 claims: 8,601 were settled by CR; the remaining 3,835 claims were settled by SA. Less than one percent of CR claims were previously settled as an SA, re-opened, and then settled as a CR.

Labor Supply Measures

I construct several labor supply measures from the quarterly wage data described above. One measure is total earnings in a quarter. In a quarter in which there are no UI taxable earnings reported, the claimant is recorded as having zero earnings. A second measure is an indicator variable that indicates any employment in a quarter: when total earnings are greater than zero, this measure is equal to one, and is equal to zero otherwise. This employment indicator variable serves as the basis for two further employment action measures. One is labor market entry, which is defined as being equal to one in a quarter if the claimant did not work in the prior quarter and works in the current quarter, is equal to zero if the claimant works in neither the prior nor the current quarter, and is missing otherwise. Another is labor market exit, which is equal to one if the claimant works in the current quarter but does not in the next quarter, is equal to zero if the claimant works in both the current and the next quarter, and is missing otherwise.

Table 1 lists descriptive statistics for the two settlement types for the quarters before and after the settlement is reached. Earnings decline prior to settlement and increase thereafter for both CR and SA claimants, but only CR claimants have a strong and sustained increase in earnings. Average employment decreases prior to and increases after settlement for CR claimants, but for SA claimants it declines before and after settlement. The patterns in entry rates and exit rates exhibit more complex trends and are shown in greater detail in Figures 1 and 2.

Figure 1 shows the entry rate by settlement type in detail. Prior to settlement, those who settle by SA have a higher employment entry rate, but in the quarter in which the settlement occurs and

all quarters thereafter, those who settle via CR have a higher entry rate. The entry rate for those who settle via SA is largely declining with no real change associated with settlement. However, those who settle via CR have a notably higher entry rate than before settlement from the quarter of settlement until the fourth quarter after settlement, after which the level of the entry rate is approximately equal to what it is prior to settlement.

Figure 2 shows the exit rate by settlement type in detail. The exit rate for those who settle via SA is always lower than that of CR claimants and is largely declining before and after settlement. There is no discernable change in the exit rate around the settlement for those who settle via SA. However, those who settle via CR have a dramatically lower exit rate in the quarters following lump-sum settlement: it drops from 25% to 15% and remains at that level in the subsequent quarters.

This descriptive analysis indicates that labor supply is increasing immediately upon receiving a CR, but not a SA settlement. This increase in labor supply is caused by an immediate and sustained increase in the labor force re-entry rate and a decrease in the exit rate. This is not consistent with the hypothesis that there is a large liquidity effect from the lump-sum payment of WC benefits, but does indicate that some aspect of the irrevocable closure of a claim increases labor supply. In the next section, I further explore the degree to which CR claimant behavior differs from SA behavior.

Difference-in-Means Analysis

Estimation Method

In order to estimate the difference in labor supply between recipients of lump-sum payments and those who receive annuity payments, I estimate regression models of the form

$$LFP = \alpha + \phi .$$

The dependent variable LFP is one of the four labor force participation measures described above: earnings, and indicator variables for any employment, employment re-entry and employment exit, and α is a constant term. ϕ is the parameter of interest, the difference in the LFP measures: for the wage regressions, it is the difference in wages, in regressions of employment participation, it represents the difference in frequency of labor force participation, and in the entry and exit regressions it represents the difference in entry rates and exit rates, respectively.

The linked administrative datasets allow the construction of a rich set of control variables. With the exception of the race and ethnicity control variables, all variables are derived from the initial report of a workplace injury to the WCIS. I include indicator variables for the two-digit industry code implied by the claimant's WC insurance classification code, the cause of injury, the nature of injury, the part of body, as well as the California county in which the injured worker lived at

the time of the injury. I also include as control variables the injured worker's age, tenure at the firm of injury, and gender, plus indicator variables that show when any of these data are missing.

There are differences in the observable characteristics of CR and SA claimants, with SA claimants exhibiting greater labor market attachment prior to injury, described in detail in Table 2. CR claimants have worked at their place of employment an average of 4.5 years rather than 8.5 years, earn $172 less per week on the date of injury, and prior to injury earned approximately $3000 less per quarter than SA claimants. These economic differences explain much of the difference in labor supply between those who settle with CR and SA. There are few other systematic differences between the two groups with respect to other characteristics at the time of injury, as shown in a more comprehensive analysis of this sample in Hyatt (2009b).

In order to control for observable heterogeneity, I employ the large number of available control variables and estimate regression models of the form

$$LFP = \alpha + \phi + \theta_{jkt} + X\beta \, .$$

Where control variable fixed effects θ_{jkt} for the labor supply of an individual in injured in quarter *t*, started litigation in quarter *j*, and reached settlement in quarter *k*, all of which are significant predictors of labor supply. The matrix *X* consists of the control variables with effects β.

Regression-Adjusted Differences

The regression models listed above are estimated separately for the six quarters preceding the injury, the quarter of settlement, and the six quarters that follow the settlement with all listed control variables, for all four dependent variables: a total of one-hundred regressions. The difference in each force participation measure for CR and SA claimants are listed in Table 3. Relative to SA, those who settle with CR earn significantly less before and after regression adjustment, and this difference grows until the quarter of settlement, after which the gap narrows. Observable characteristics account for about half of the difference in average earnings. Results are similar for employment frequency.

Entry rates and exit rates do not change as dramatically after regression adjustment. The entry rates are markedly lower for CR claimants before and after regression adjustment, but afterwards their rank ordering changes in both cases, and those who settle with CR have an entry rate that is initially about five percentage points higher than those who settle with SA, but this difference in re-entry rates declines during six quarters following settlement. Exit rates are always higher for those who settle with CR, both before and after the quarter of settlement. For quarters that follow settlement, the exit rate differential drops from 12% to 4%.

These differences are summarized in Table 4, which shows differences-in-differences estimates, presented separately based on then number of quarters from the quarter of settlement. The estimate for five quarters compares the average parameter estimates for the five quarters that follow the quarter of settlement to the five quarters that precede the settlement; the other two

time horizons, three quarters and one quarter, are constructed similarly. Comparing the quarter that follows the quarter of settlement to the quarter that precedes it indicates that wages rise slightly, but labor force participation, entry rates, and exit rates increase dramatically. Average earnings in a quarter changes significantly over longer time horizons, after regression adjustment, it changes from less than $50 difference comparing only one quarter to more than $250 per quarter comparing five quarters. Entry rates and exit rates are quite stable and the difference-in-differences estimates do not change dramatically on the basis of time horizon considered. Entry rates increase by 5% for those who settle with a CR relative to those who settle with SA, and exit rates decline by 8% for those who settle with CR relative to those who settle with SA.

Discussion

California Workers' Compensation claimants who settle their claim through Compromise and Release, an irreversible lump-sum settlement, clearly have an immediate increase in labor force participation. I have demonstrated this phenomenon in a descriptive analysis, and, in summary, the short-term effect of receiving a lump-sum payment is a 5% increase in the quarterly labor force re-entry rate and an 8% decline in the quarterly labor force exit rate. This is clearly not consistent with a strong liquidity effect.

In order to provide some theoretical context in which to interpret this surprising result, I documented the small psychological literature on the subject of "closure," and I maintain that the emotional state of the claimants may be key to understanding their labor supply. Once a claim is

settled, the injured worker may experience what is commonly called “closure,” which could lead to an easier resumption of one life’s major activities, finding, or maintaining, employment.

My greatest limitation was that I lacked a method of validating that it is closure, and not some unknown other factor, that induces claimants to resume work when they reach an irreversible settlement with their insurer. Further research can strengthen or weaken the theory that “closure” plays a major role in the labor supply decision of someone who experiences traumatic past event. Self-reported emotional states of WC litigants could be measured before and after settlement.

I would also like to suggest that labor supply patterns around other legal events should be measured to see if similar patterns exist. For example, the phenomenon that female labor supply increases around the time of a divorce, as documented in Johnson and Skinner (1986, 1988), may to a certain degree be concentrated around the date a divorce certificate is granted, or, if the divorce is litigated, around the date of settlement. Furthermore, litigants who are victims of accidents outside the workplace may also increase their labor supply after settlement.

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Figure 1: Entry Rate Near Settlement Date

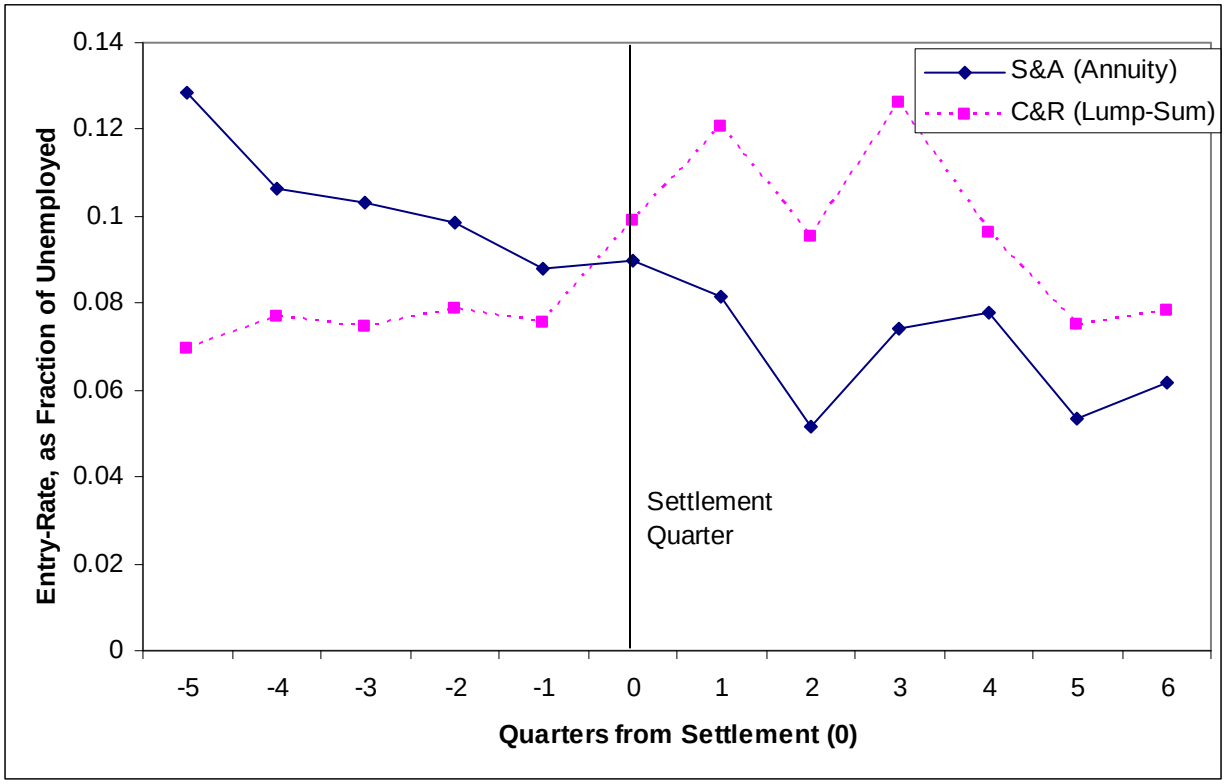

Figure 2: Exit Rate Near Settlement Date

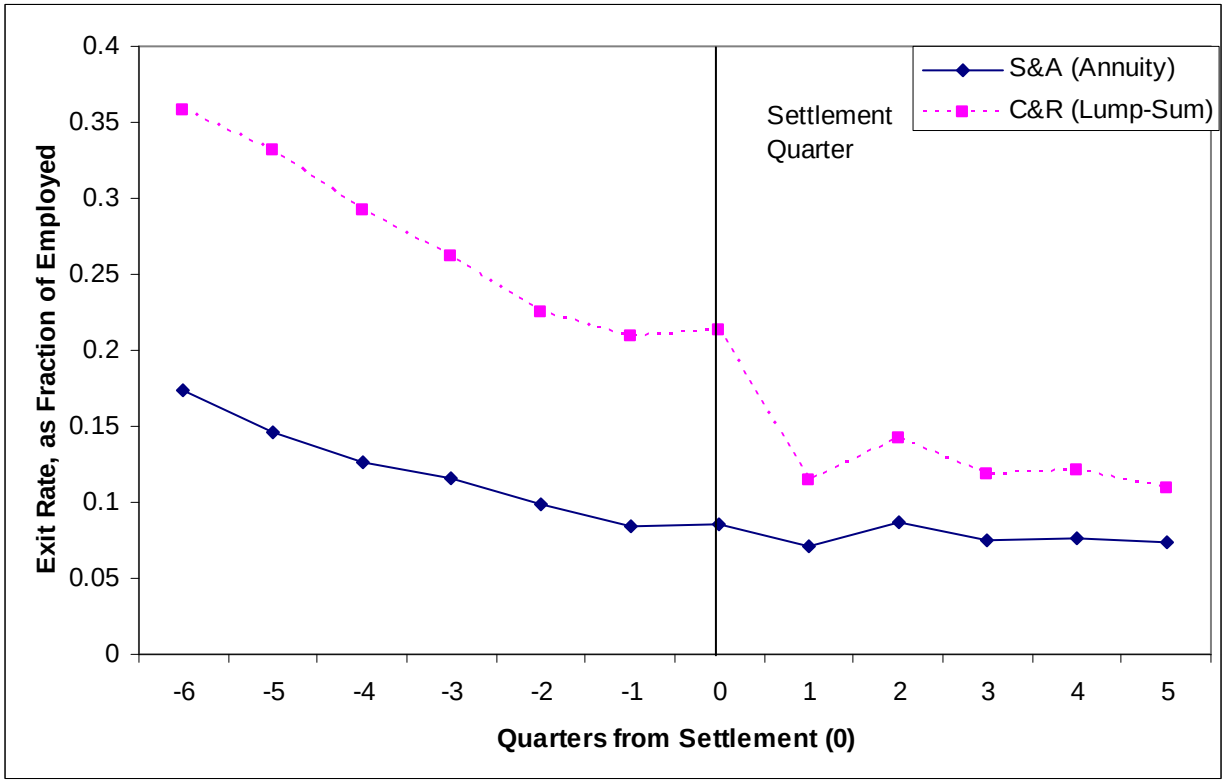

Table 1: Average Earnings, Employment, Entry and Exit Rates by Settlement Type

Quarters from Settlement	Compromise and Release Settlement (Paid as a lump-sum)				Stipulation and Award Settlement (Benefits provided over time)			
	Average Wages	Fraction Employed	Entry Rate	Exit Rate	Average Wages	Fraction Employed	Entry Rate	Exit Rate
-6	2069	0.394	-	0.358	5472	0.622	-	0.174
	(48)	(0.005)		(0.008)	(122)	(0.008)		(0.008)
-5	1526	0.295	0.070	0.332	5118	0.562	0.128	0.147
	(45)	(0.005)	(0.004)	(0.009)	(45)	(0.008)	(0.009)	(0.008)
-4	1331	0.251	0.077	0.293	5005	0.526	0.107	0.127
	(39)	(0.005)	(0.003)	(0.010)	(118)	(0.008)	(0.008)	(0.007)
-3	1304	0.234	0.075	0.262	5163	0.508	0.103	0.116
	(42)	(0.005)	(0.003)	(0.010)	(138)	(0.008)	(0.007)	(0.007)
-2	1338	0.233	0.079	0.225	5136	0.498	0.099	0.099
	(45)	(0.005)	(0.003)	(0.009)	(127)	(0.008)	(0.007)	(0.007)
-1	1384	0.238	0.075	0.209	5251	0.493	0.088	0.084
	(48)	(0.005)	(0.003)	(0.009)	(127)	(0.008)	(0.006)	(0.006)
0	1433	0.264	0.099	0.213	5217	0.497	0.090	0.086
	(42)	(0.005)	(0.004)	(0.009)	(126)	(0.008)	(0.006)	(0.006)
1	1621	0.296	0.121	0.115	5332	0.495	0.081	0.071
	(41)	(0.005)	(0.004)	(0.006)	(163)	(0.008)	(0.006)	(0.006)
2	1783	0.329	0.095	0.142	5189	0.487	0.052	0.086
	(45)	(0.005)	(0.004)	(0.007)	(141)	(0.008)	(0.005)	(0.007)
3	2089	0.367	0.126	0.119	5134	0.483	0.074	0.076
	(45)	(0.005)	(0.004)	(0.006)	(127)	(0.008)	(0.006)	(0.006)
4	2346	0.384	0.096	0.122	5083	0.486	0.078	0.077
	(59)	(0.005)	(0.004)	(0.006)	(121)	(0.008)	(0.006)	(0.006)
5	2405	0.384	0.075	0.109	5199	0.476	0.053	0.073
	(50)	(0.005)	(0.004)	(0.005)	(140)	(0.008)	(0.006)	(0.006)
6	2515	0.390	0.078	-	5082	0.474	0.062	-
	(48)	(0.005)	(0.004)		(133)	(0.008)	(0.005)	

Note: Standard errors in parentheses. Estimates are derived from a sample of 12,436 litigated Workers Compensation claims, 8601 of which were settled by Compromise and Release, and 3835 by Stipulation and Award. See text for details on variable construction.

Table 2: Employment Characteristics

	Settlement Type		
	CR	SA	CR - SA
Tenure in Years	4.5	8.5	-4.0 ***
	(0.1)	(0.1)	(0.2)
Tenure Missing	0.037	0.030	0.007 **
	(0.002)	(0.003)	(0.003)
Weekly Wage	536	708	-172 ***
	(3)	(6)	(7)
Pre-Injury Earnings 1	6844	9974	-3130 ***
	(49)	(103)	(114)
Pre-Injury Earnings 2	6630	9665	-3035 ***
	(53)	(104)	(117)
Pre-Injury Earnings 3	6149	9286	-3137 ***
	(52)	(104)	(116)
Pre-Injury Earnings 4	5885	9066	-3181 ***
	(55)	(106)	(119)

Note: Standard errors in parentheses. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively. "Pre-Injury Earnings 1" refers to earnings 1 quarter prior to injury, etc.

Table 3: Difference between Compromise and Release and Stipulation and Award Claimants

Quarters from Settlement	Quarterly Earnings		Employment Indicator		Employment Re-Entry		Employment Exit	
	No Controls	All Control Variables	No Controls	All Control Variables	No Controls	All Control Variables	No Controls	All Control Variables
-6	-3403 ***	-1161 ***	-0.228 ***	-0.133 ***	-	-	0.184 ***	0.117 ***
	(131)	(116)	(0.009)	(0.009)			(0.011)	(0.014)
-5	-3591 ***	-1494 ***	-0.267 ***	-0.166 ***	-0.059 ***	-0.045 ***	0.186 ***	0.137 ***
	(132)	(114)	(0.009)	(0.010)	(0.009)	(0.011)	(0.012)	(0.015)
-4	-3675 ***	-1758 ***	-0.275 ***	-0.181 ***	-0.030 ***	-0.020 **	0.166 ***	0.136 ***
	(125)	(106)	(0.009)	(0.010)	(0.008)	(0.009)	(0.012)	(0.015)
-3	-3859 ***	-1966 ***	-0.275 ***	-0.188 ***	-0.028 ***	-0.015 *	0.146 ***	0.119 ***
	(144)	(111)	(0.009)	(0.010)	(0.008)	(0.009)	(0.012)	(0.015)
-2	-3798 ***	-2066 ***	-0.265 ***	-0.182 ***	-0.020 **	-0.006	0.126 ***	0.124 ***
	(135)	(133)	(0.009)	(0.010)	(0.008)	(0.008)	(0.012)	(0.015)
-1	-3867 ***	-2086 ***	-0.255 ***	-0.181 ***	-0.012 *	-0.010	0.125 ***	0.122 ***
	(136)	(154)	(0.009)	(0.010)	(0.007)	(0.008)	(0.011)	(0.014)
0	-3784 ***	-2173 ***	-0.233 ***	-0.170 ***	0.009	0.009	0.128 ***	0.118 ***
	(133)	(121)	(0.009)	(0.010)	(0.007)	(0.008)	(0.011)	(0.013)
1	-3710 ***	-2039 ***	-0.199 ***	-0.142 ***	0.039 ***	0.044 ***	0.044 ***	0.041 ***
	(168)	(133)	(0.009)	(0.010)	(0.007)	(0.009)	(0.009)	(0.011)
2	-3406 ***	-1747 ***	-0.157 ***	-0.109 ***	0.044 ***	0.038 ***	0.056 ***	0.045 ***
	(148)	(129)	(0.010)	(0.011)	(0.006)	(0.007)	(0.009)	(0.012)
3	-3045 ***	-1617 ***	-0.115 ***	-0.078 ***	0.052 ***	0.047 ***	0.043 ***	0.040 ***
	(134)	(119)	(0.010)	(0.011)	(0.007)	(0.009)	(0.008)	(0.011)
4	-2737 ***	-1349 ***	-0.102 ***	-0.073 ***	0.018 **	0.012	0.045 ***	0.028 ***
	(134)	(139)	(0.010)	(0.011)	(0.007)	(0.008)	(0.008)	(0.011)
5	-2794 ***	-1362 ***	-0.092 ***	-0.062 ***	0.022 ***	0.023 ***	0.036 ***	0.030 ***
	(149)	(130)	(0.010)	(0.011)	(0.006)	(0.007)	(0.008)	(0.010)
6	-2567 ***	-1165 ***	-0.083 ***	-0.056 ***	0.017 **	0.014 *	-	-
	(141)	(127)	(0.010)	(0.011)	(0.007)	(0.007)		

Note: Standard errors in parentheses. *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. Fractions are derived from a sample of 12,436 litigated Workers Compensation claims, 8601 of which were settled by Compromise and Release, and 3835 by Stipulation and Award. See text for details on variable construction.

Table 4: Difference-in-Differences Estimates of Labor Force Participation Changes

Quarters from Settlement	Quarterly Earnings		Employment Indicator		Employment Re-Entry		Employment Exit	
	No Controls	All Control Variables	No Controls	All Control Variables	No Controls	All Control Variables	No Controls	All Control Variables
One Quarter	156	47	0.056 ***	0.039 **	0.052 ***	0.053 ***	-0.081 ***	-0.081 ***
	(216)	(204)	(0.013)	(0.015)	(0.010)	(0.012)	(0.014)	(0.018)
Three Quarters	454 ***	239 ***	0.108 ***	0.074 ***	0.065 ***	0.053 ***	-0.085 ***	-0.080 ***
	(118)	(107)	(0.008)	(0.008)	(0.006)	(0.007)	(0.008)	(0.011)
Five Quarters	619 ***	251 ***	0.134 ***	0.087 ***	0.065 ***	0.052 ***	-0.105 ***	-0.091 ***
	(89)	(81)	(0.006)	(0.007)	(0.005)	(0.005)	(0.007)	(0.008)

Note: Standard errors in parentheses. *, ** and *** represent statistical significance at the 10%, 5% and 1% levels, respectively. Fractions are derived from a sample of 12,436 litigated Workers Compensation claims, 8601 of which were settled by Compromise and Release, and 3835 by Stipulation and Award. See text for details on variable construction.